

# V&V Reference Report

## L2 ASCDS Version : 10.9.1

Observation 6169 - L2 Version 4  
Chandra X-Ray Center

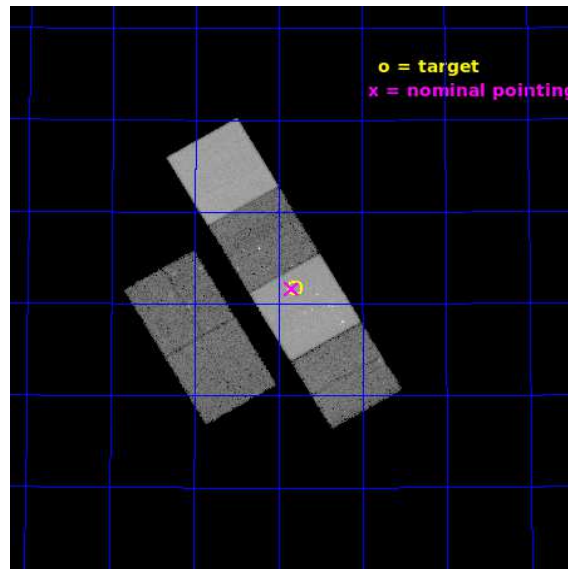
L2 Processing Date : Oct 5 2020

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

seq_num	600392	Sequence number
obs_id	6169	Observation id
title	An Ultra-Deep Study of M101	Proposal title
observer	Dr. K.D. Kuntz	Principal investigator
object	M101	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	210.950833	Observer's specified target RA [deg]
dec_targ	54.361389	Observer's specified target Dec [deg]
ra_nom	210.95964602077	Nominal RA [deg]
dec_nom	54.361000294652	Nominal Dec [deg]
roll_nom	59.664183011053	Nominal Roll [deg]
revision	4	Processing version of data
ontime	29753.599889159	Sum of GTIs [s]
livetime	29376.841891896	Livetime [s]
ontime2	29750.358898968	Sum of GTIs [s]
ontime3	29753.599889159	Sum of GTIs [s]
ontime5	29753.599889159	Sum of GTIs [s]
ontime6	29750.358898938	Sum of GTIs [s]
ontime7	29753.599889159	Sum of GTIs [s]
ontime8	29743.876938522	Sum of GTIs [s]
l2events	367303	Number of level 2 events

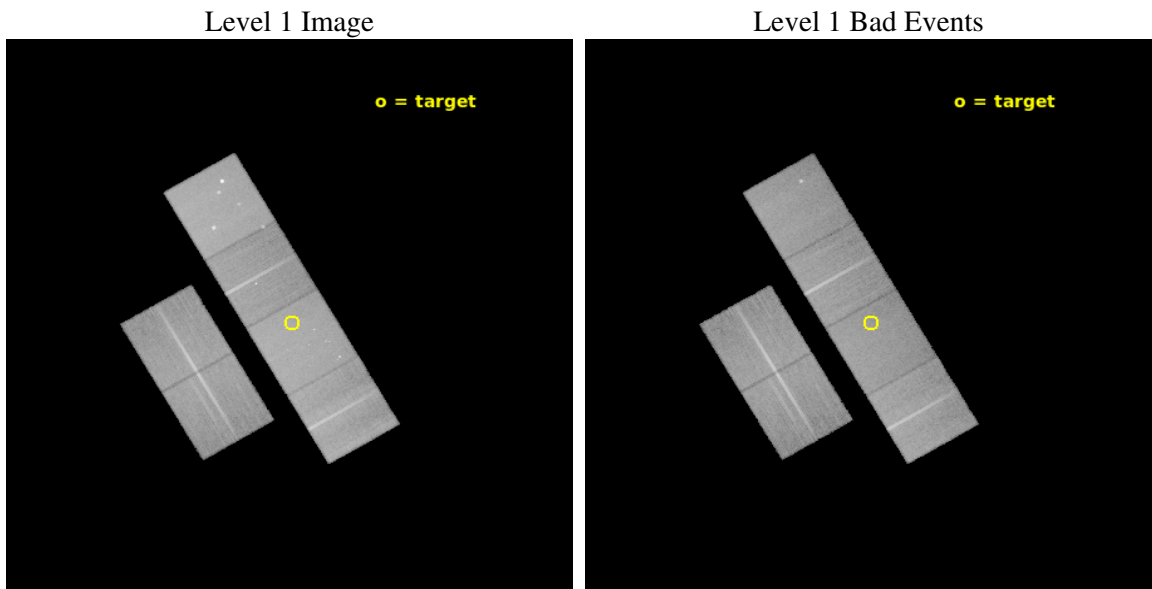




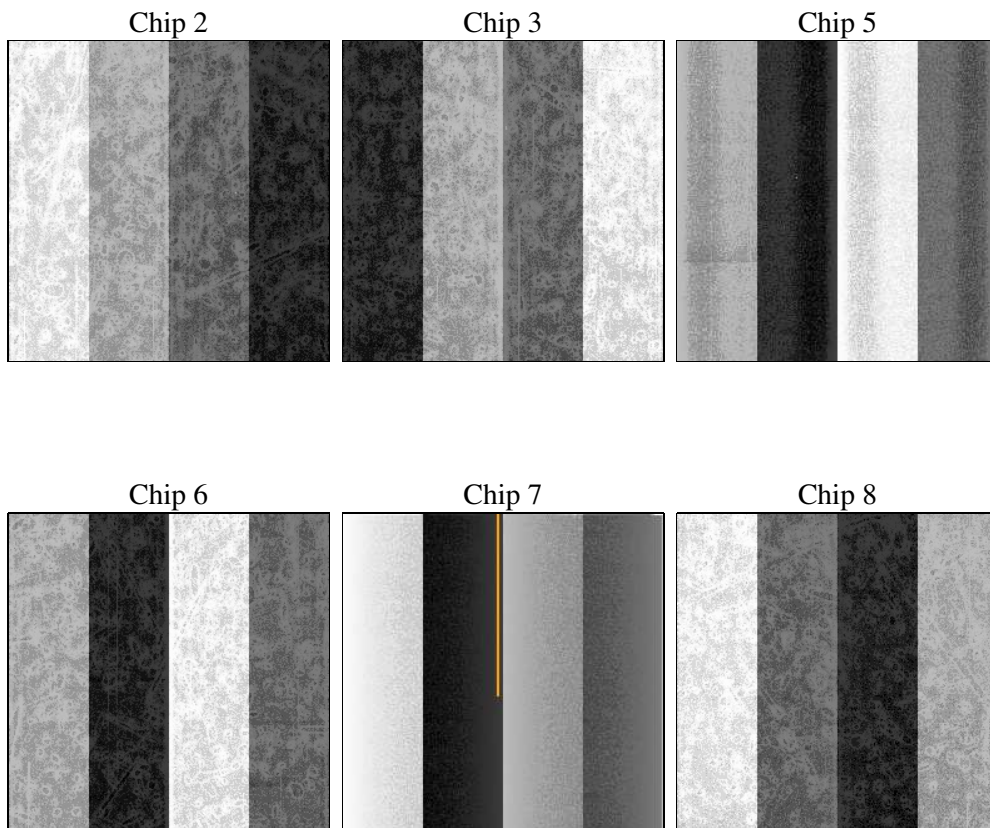
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	29753.599889159	Sum of GTIs [s]
caldsver	4.9.2	&#160	ontime2	29750.358898968	Sum of GTIs [s]
date	2020-10-05T19:53:35	Date and time of file creation	ontime3	29753.599889159	Sum of GTIs [s]
revision	4	Processing version of data	ontime5	29753.599889159	Sum of GTIs [s]
			ontime6	29750.358898938	Sum of GTIs [s]
			ontime7	29753.599889159	Sum of GTIs [s]
			ontime8	29743.876938522	Sum of GTIs [s]
			l1events	1594483	Number of level 1 events

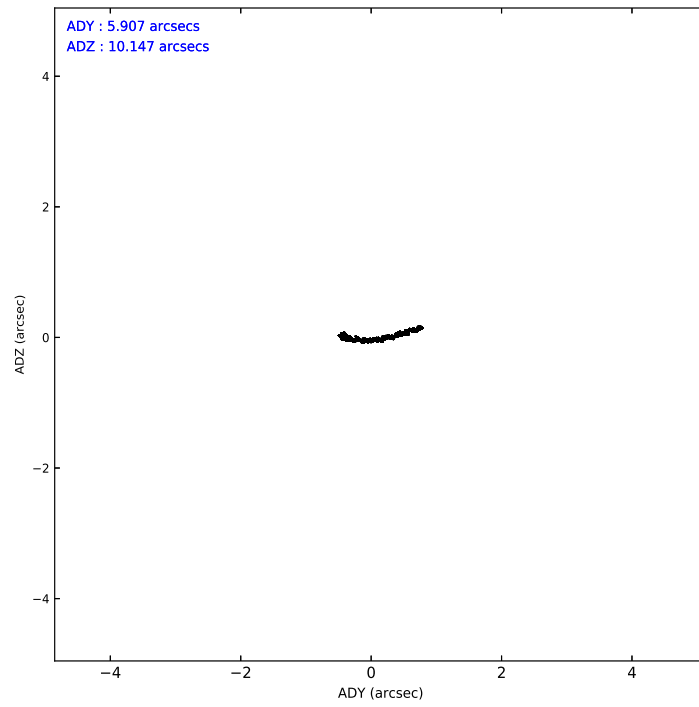
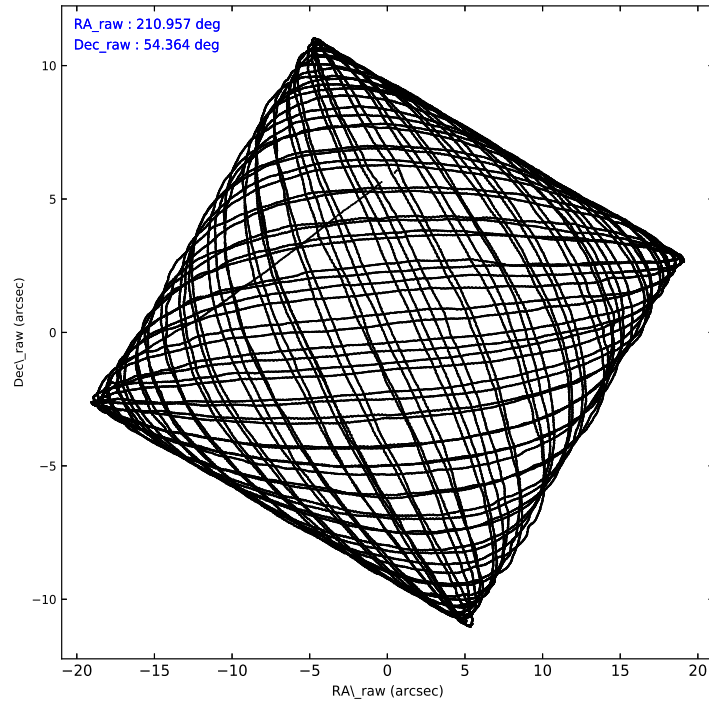
### 2.1.4 Events

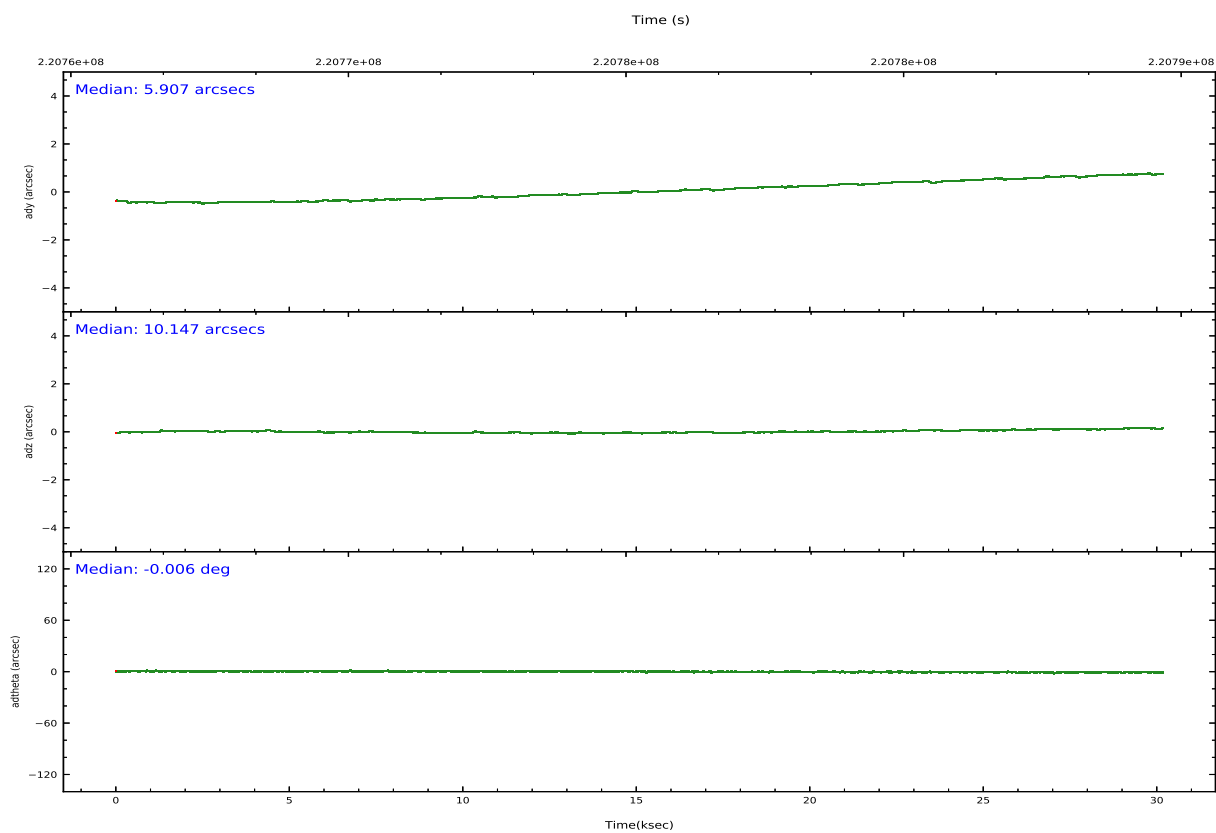
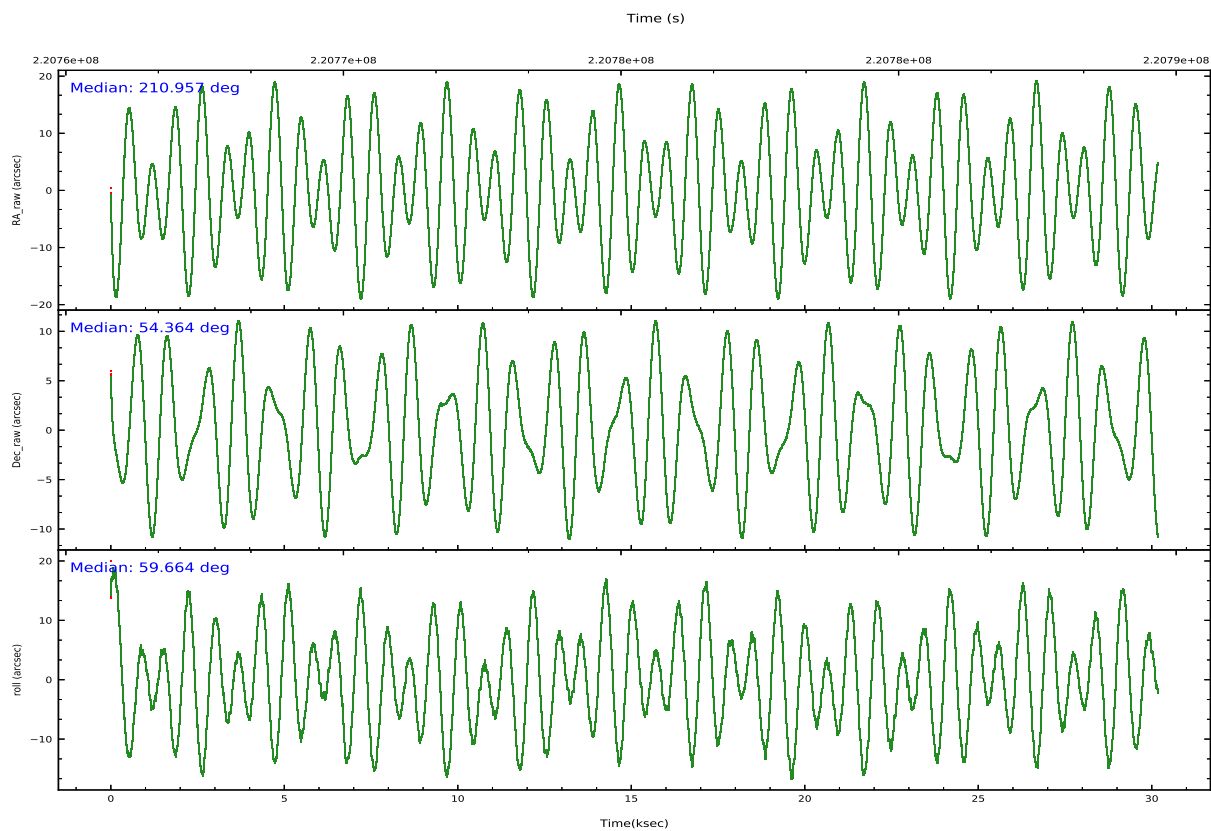
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	225382	214469	338220	225831	307144	283437	grade 0 events	12332	11215	19257	12263	13934	19302
rejected events	198255	188755	180643	197164	175528	222593		5%	5%	5%	5%	4%	6%
rejected %	87%	88%	53%	87%	57%	78%	grade 1 events	126	148	1827	110	276	223
								0%	0%	0%	0%	0%	0%
							grade 2 events	5416	4906	46149	5708	26624	13373
								2%	2%	13%	2%	8%	4%
							grade 3 events	2508	2544	6247	2644	11528	6501
								1%	1%	1%	1%	3%	2%
							grade 4 events	2470	2569	5835	2562	11580	6016
								1%	1%	1%	1%	3%	2%
							grade 5 events	8772	9771	24304	10220	28544	13285
								3%	4%	7%	4%	9%	4%
							grade 6 events	4403	4483	80107	5491	67964	15680
								1%	2%	23%	2%	22%	5%
							grade 7 events	189355	178833	154494	186833	146694	209057
								84%	83%	45%	82%	47%	73%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	210.957161	210.95964602077	Subarray requested	NONE	NONE
[deg] Pointing Dec	54.336773	54.361000294652	Alternating exposures requested	N	N
[deg] Pointing Roll	59.507190	59.664183011053	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	220761480.184000	220759850.94207			
Observation start date	2004-12-30T02:36:56	2004-12-30T02:10:50			
[s] Observation end time (MET)	220791480.184000	220792385.98104			
Observation end date	2004-12-30T10:56:56	2004-12-30T11:13:05			
Read mode	TIMED	TIMED			

## 2.3 Aspect



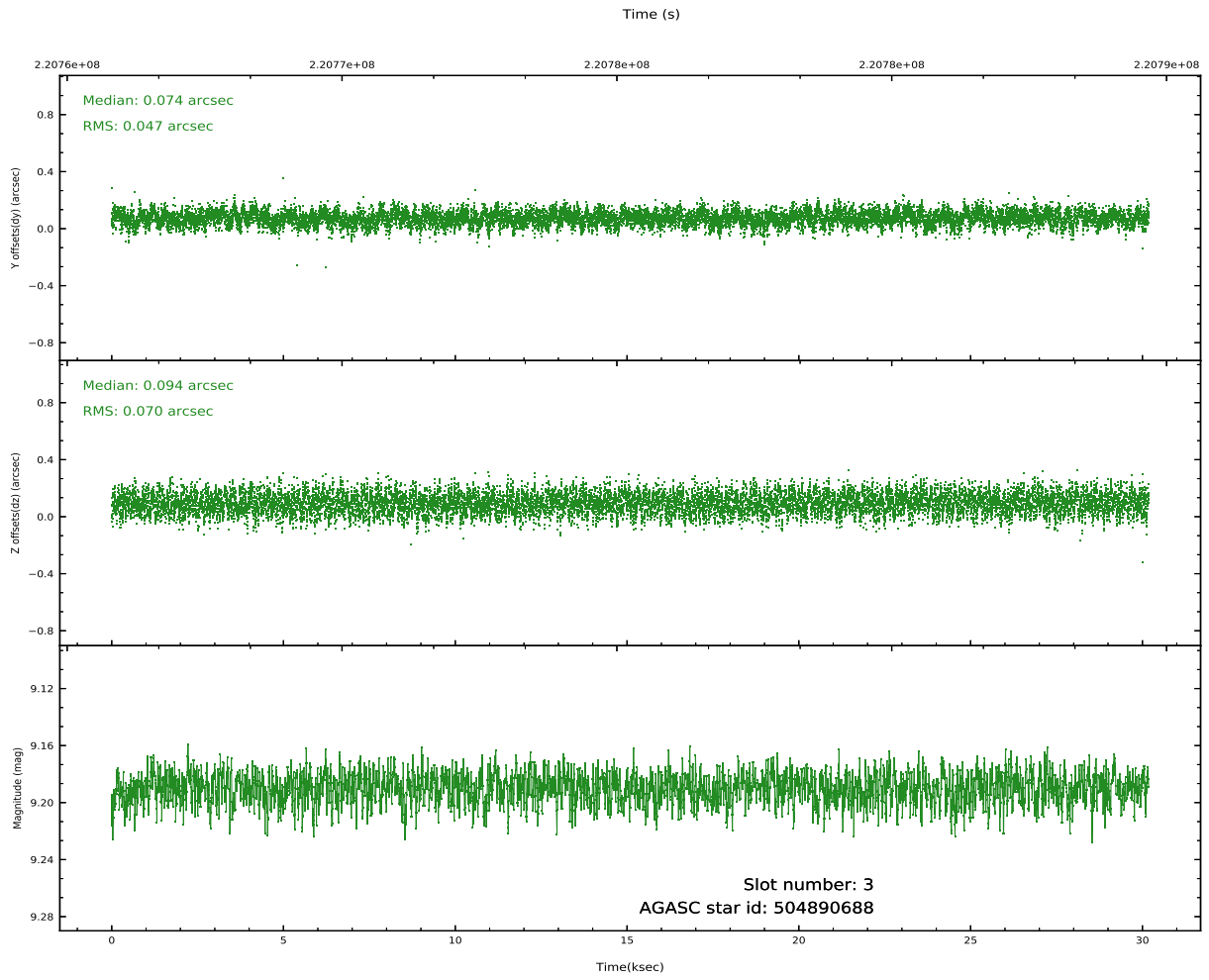
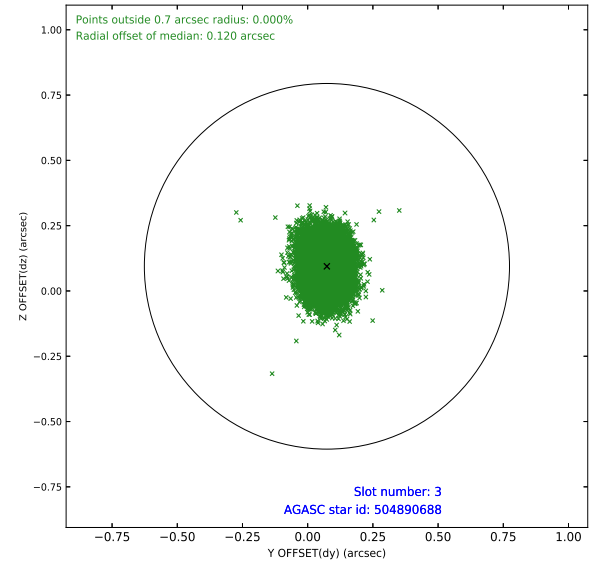
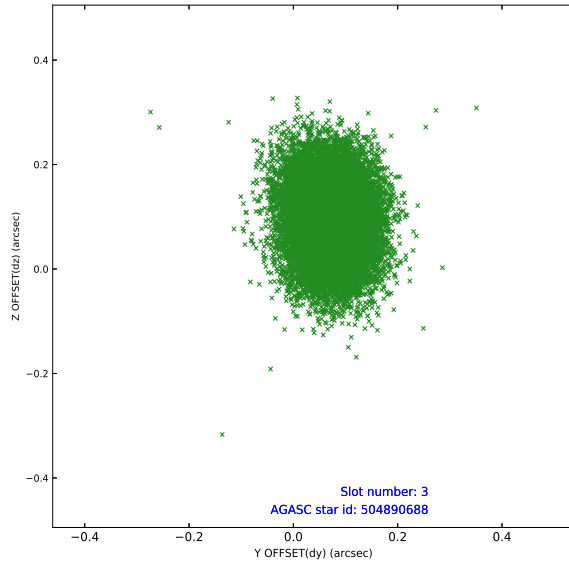


Slot Statistics

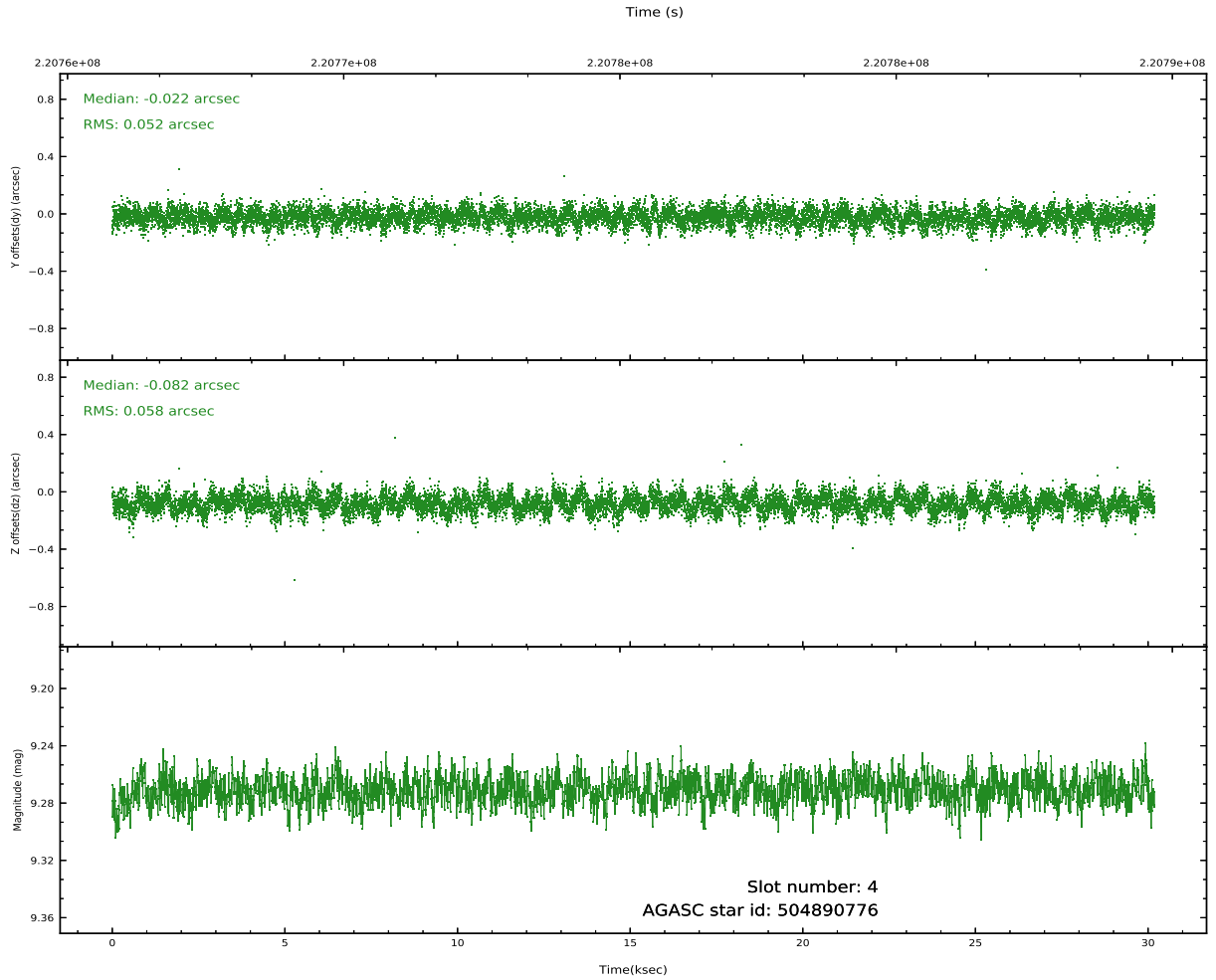
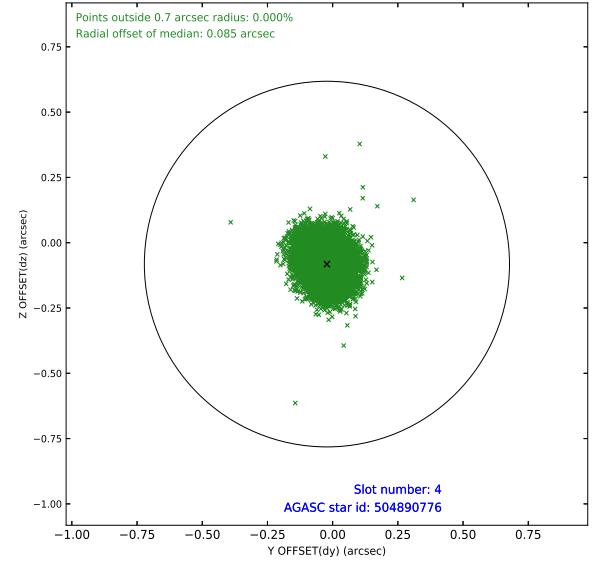
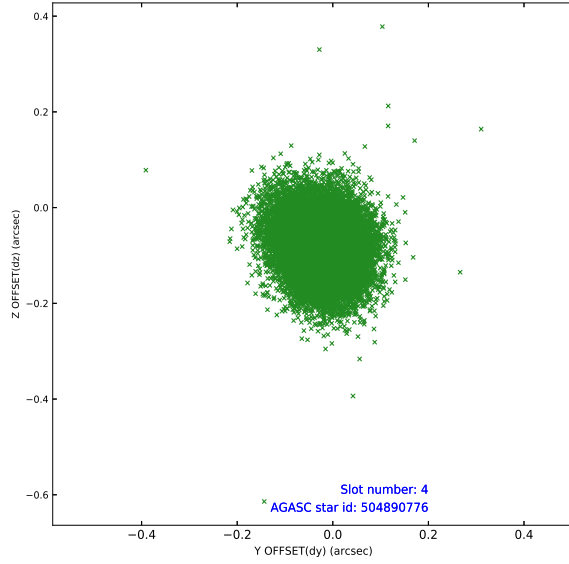
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	7363	1.000	-0.102	-0.064	0.011	0.018	0.000000	0.000000	-758.72	-1731
1	FID		ACIS-S-4	7.21	7362	1.000	0.172	0.066	0.020	0.028	0.000000	0.000000	2154.74	177
2	FID		ACIS-S-5	7.23	7361	1.000	-0.100	0.007	0.013	0.020	0.000000	0.000000	-1811.53	170
3	GUIDE	used	504890688	9.19	14714	1.000	0.074	0.094	0.089	0.144	211.697686	53.837149	-744.14	-2264
4	GUIDE	used	504890776	9.27	14717	1.000	-0.022	-0.082	0.082	0.134	211.095934	54.816966	1636.04	629
5	GUIDE	used	504891480	8.06	14720	1.000	-0.052	-0.045	0.064	0.099	210.708012	54.666096	759.35	1049
6	GUIDE	used	504894856	8.98	14719	1.000	0.035	-0.075	0.081	0.131	209.819510	54.132689	-1833.88	1704
7	GUIDE	used	504894408	9.27	14713	1.000	-0.036	0.107	0.089	0.144	211.942794	54.047749	173.34	-2315

## 2.4 Star Slots

### 2.4.1 Slot 3

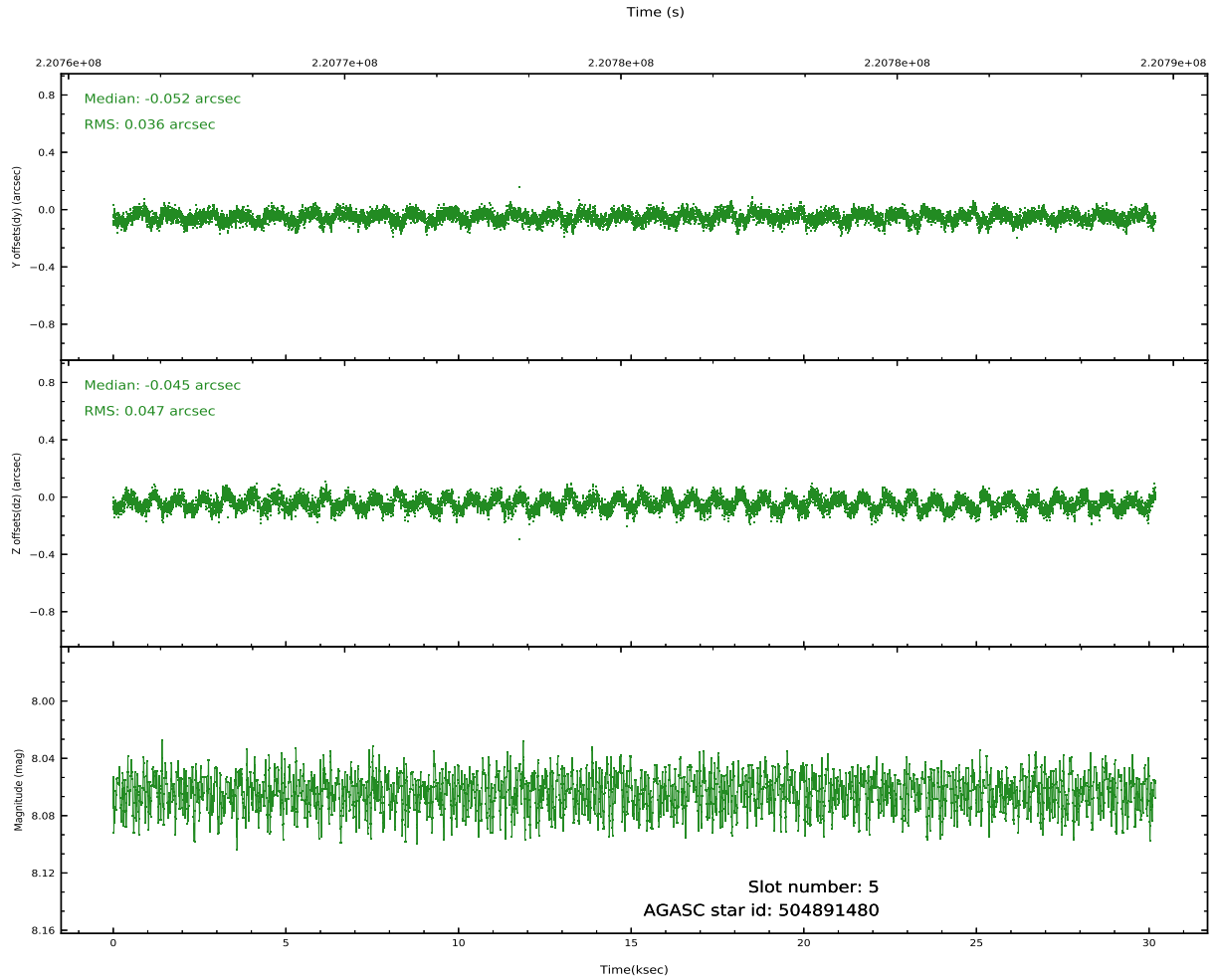
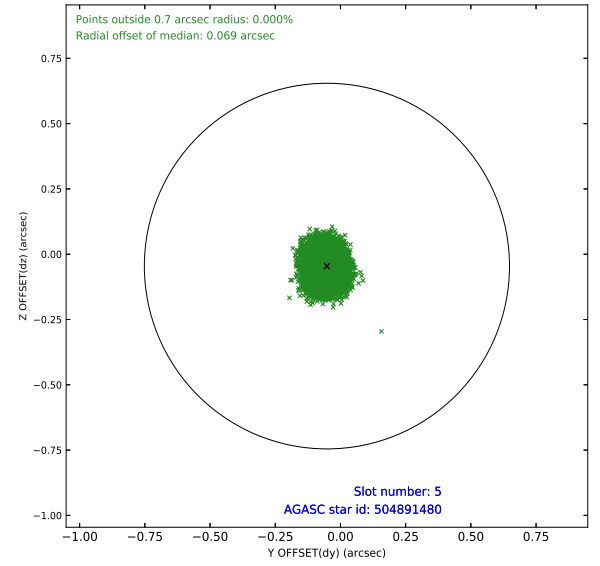
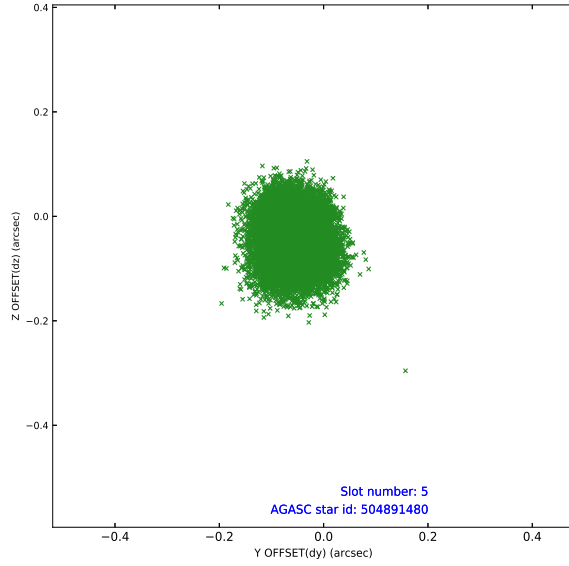


## 2.4.2 Slot 4

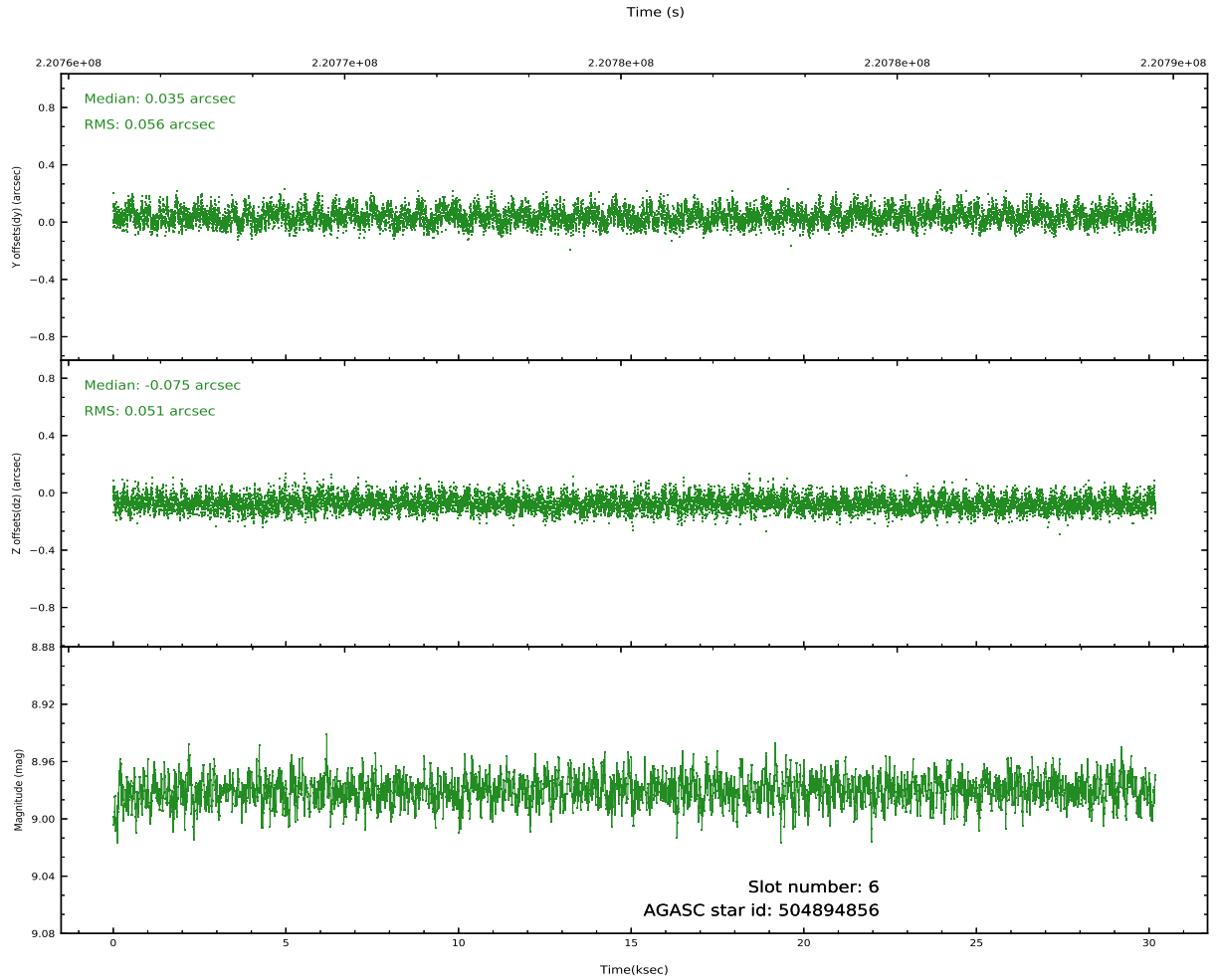
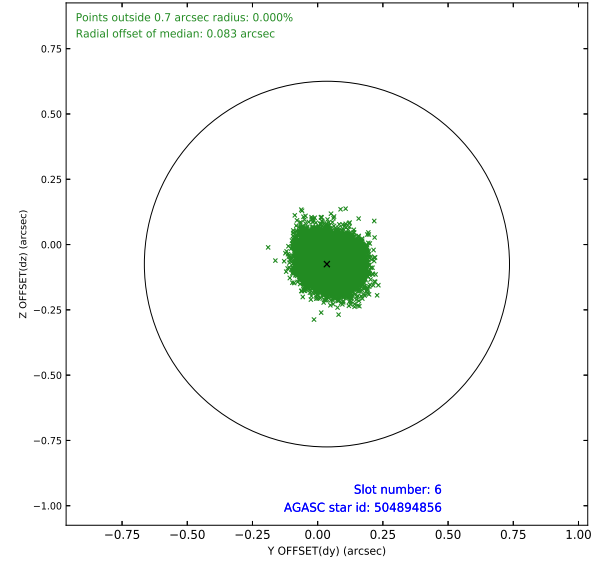
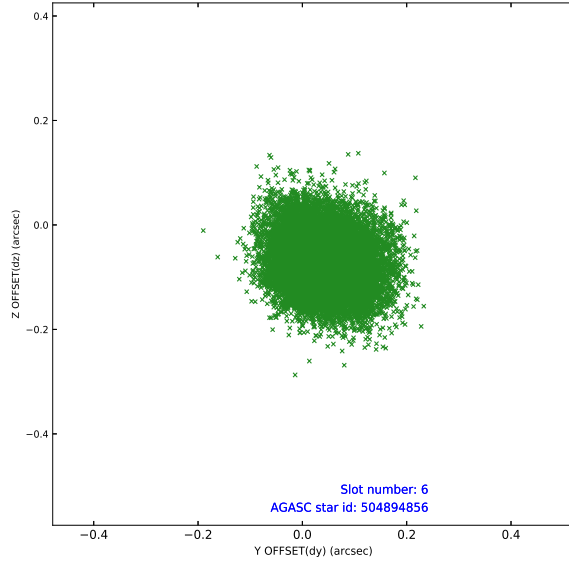




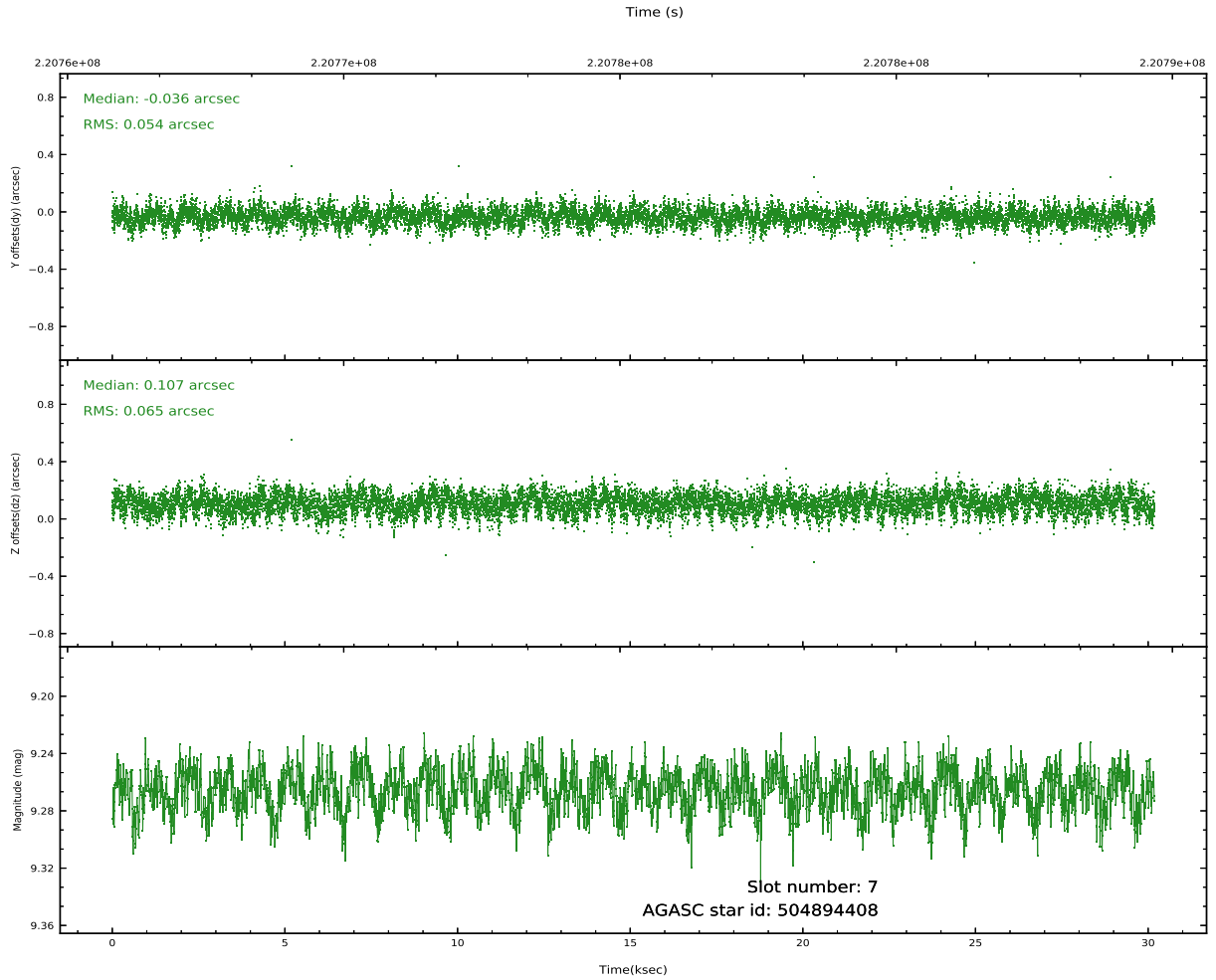
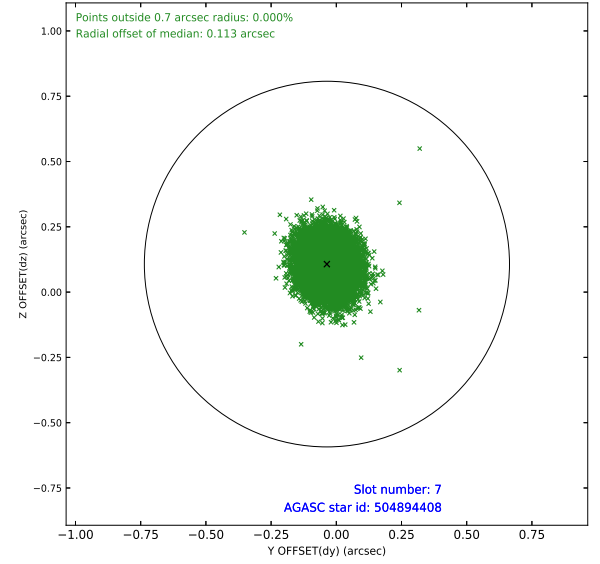
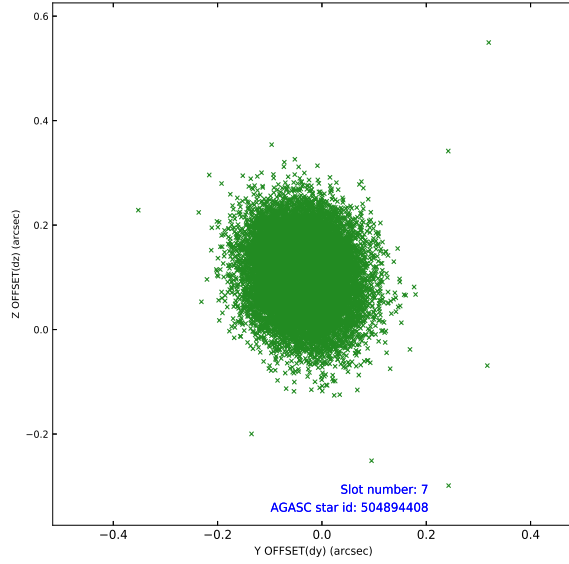
### 2.4.3 Slot 5



## 2.4.4 Slot 6

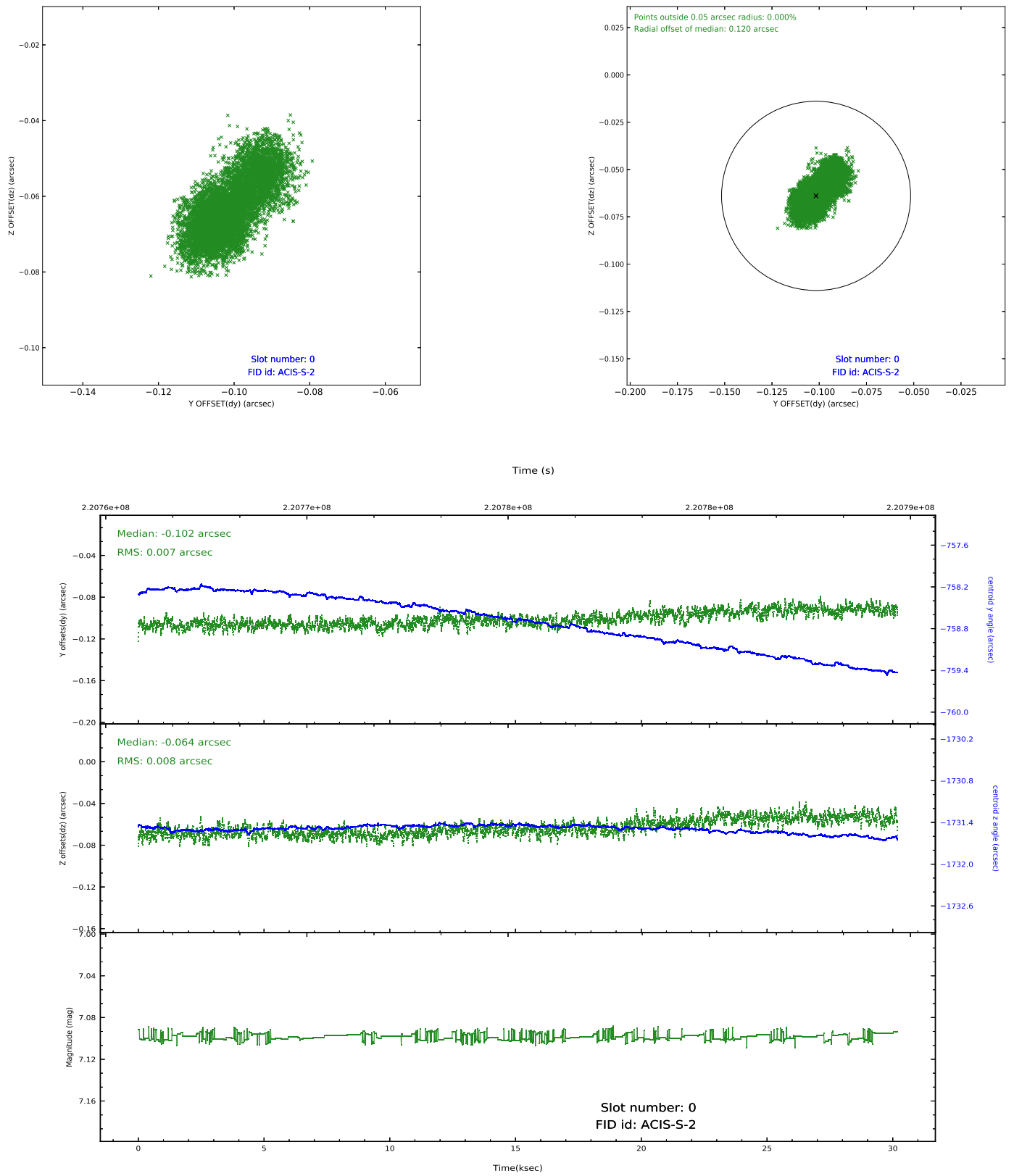


## 2.4.5 Slot 7

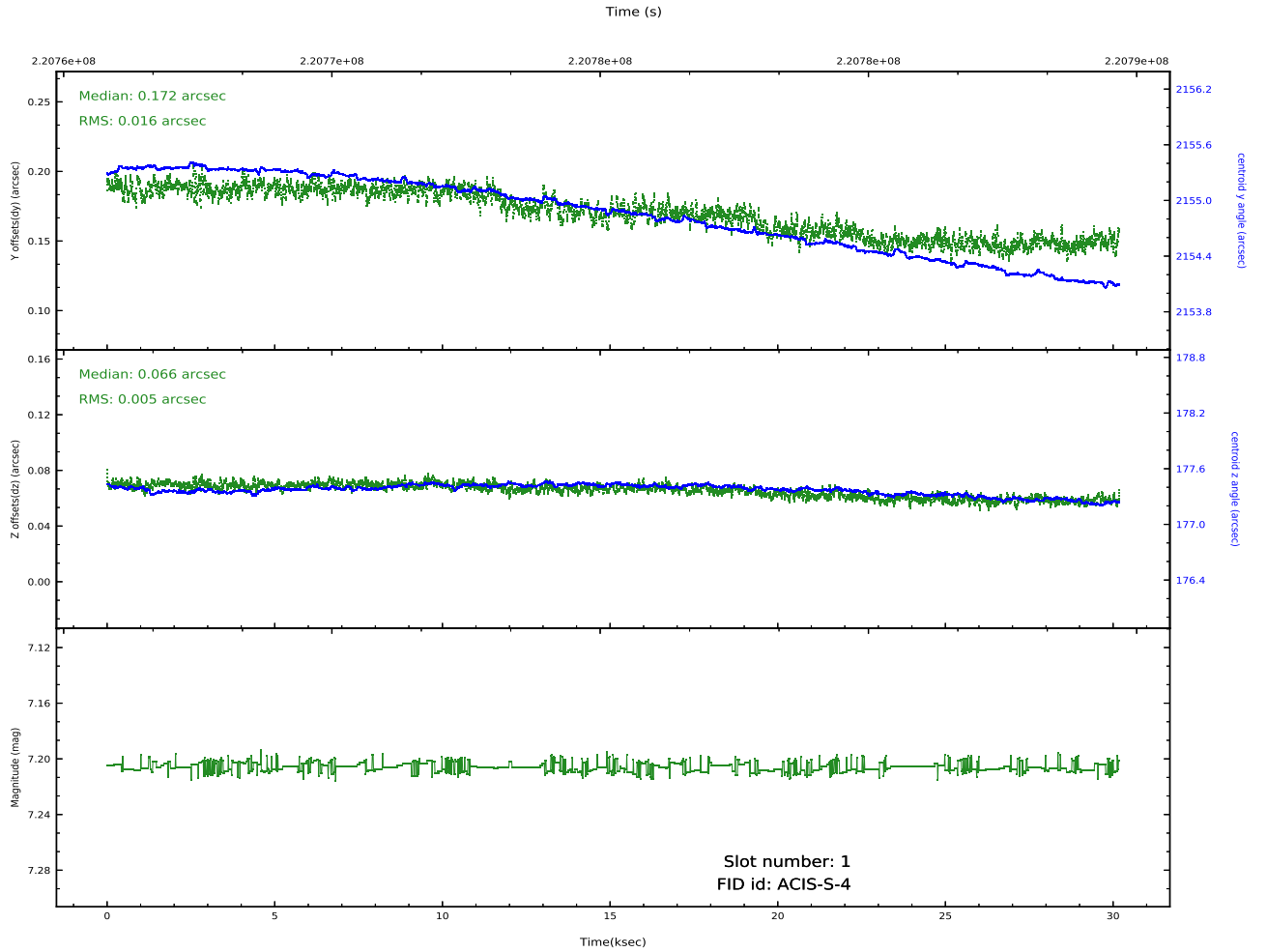
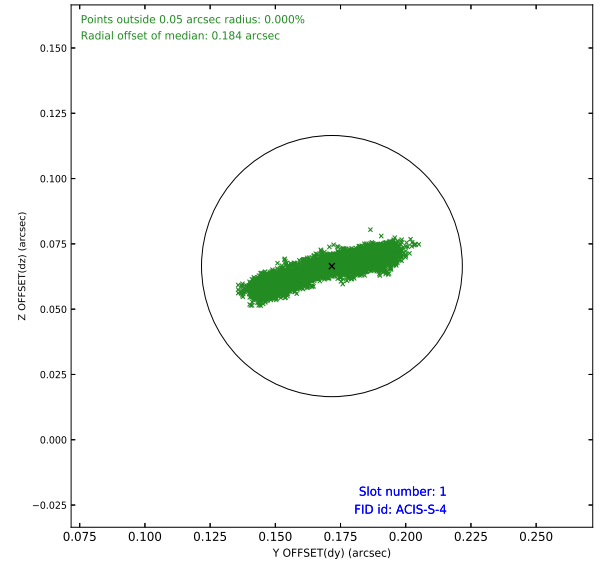
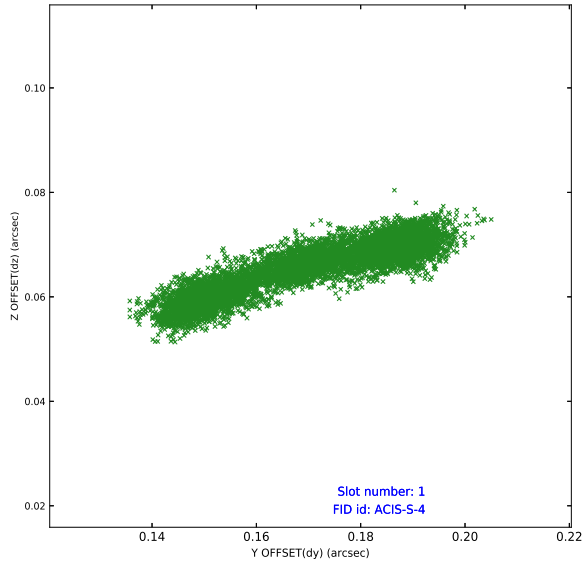


## 2.5 FID Slots

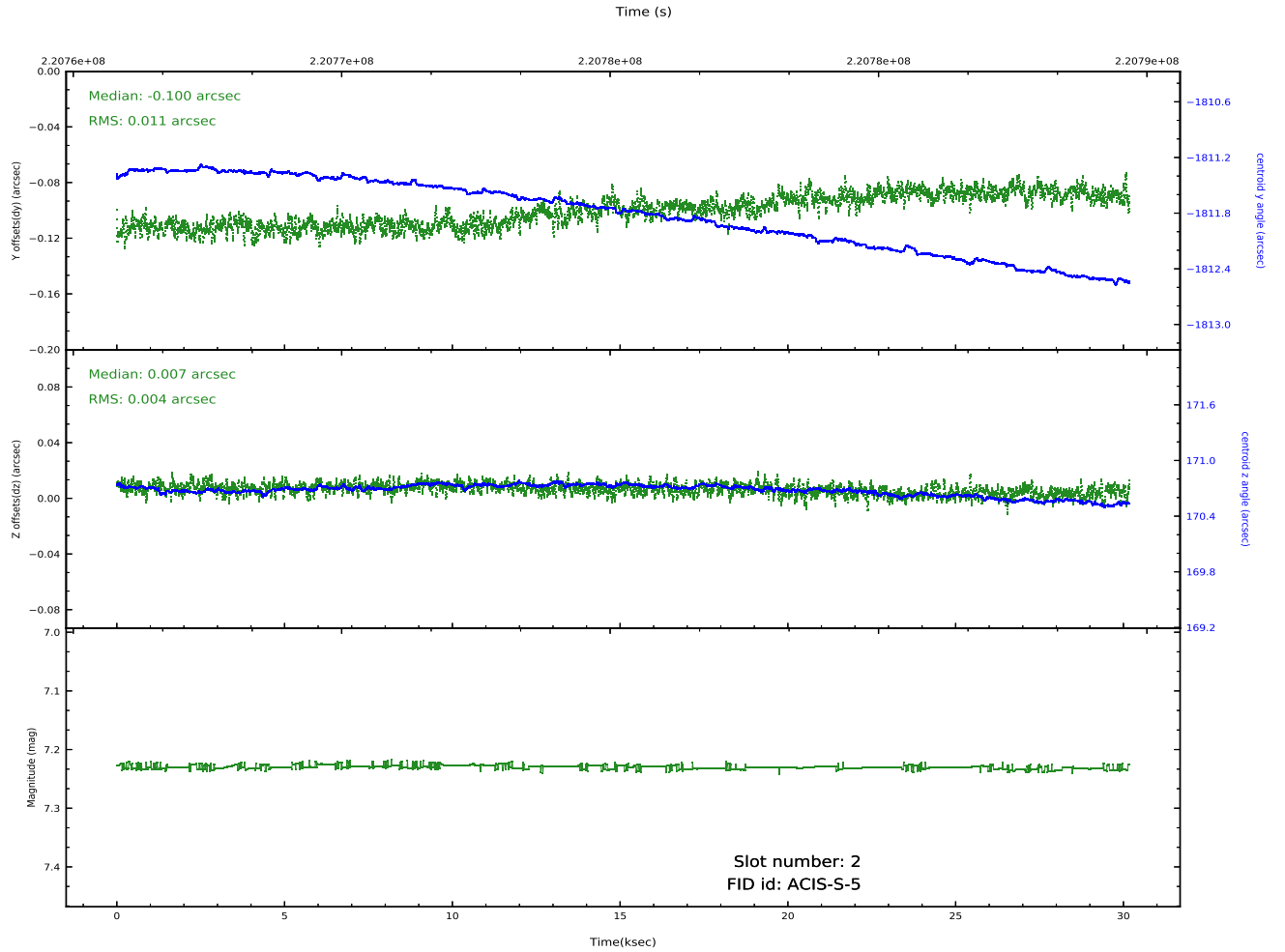
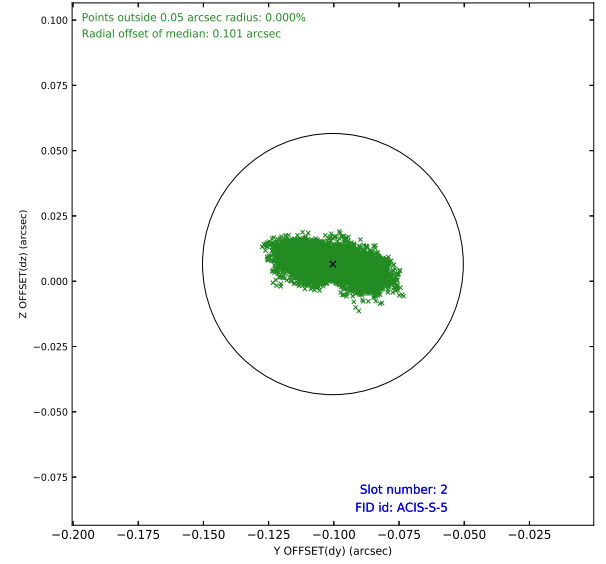
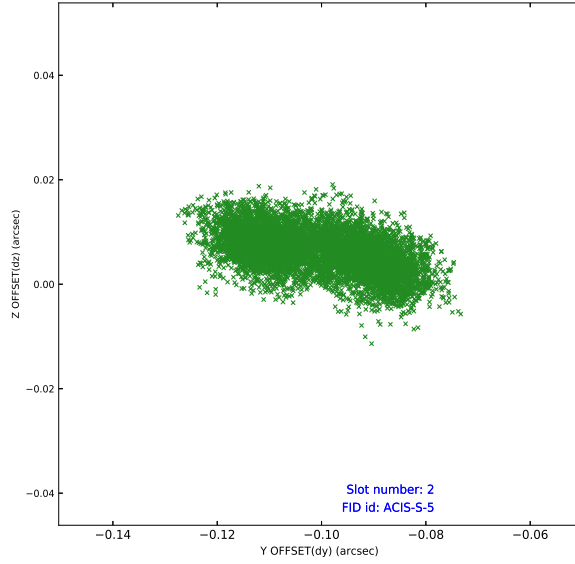
### 2.5.1 Slot 0



## 2.5.2 Slot 1



## 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.75359

### A.2 Comments